

## REMARKS

The Examiner is thanked for the indication that claims 5-7 and 12-13 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph, and to include all limitations of the base claim and any intervening claims. The Examiner also is thanked for indicating that claims 14-16, 21-25, 27-29, and 31-32 would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims.

Claims 1-11, 17-20, 23-26, 28-30, and 32 are pending in the application. Claims 1, 8, 17, 26, 30, 33, 37, and 40 are independent. By the foregoing Amendment, claims 1, 5, 8, 17, 26, 28-30, and 32 have been amended, claims 12-16, 21-22, 27, and 31 have been canceled, and claims 33-43 have been added. Figure 1 has been amended and the Specification has been amended. Support for the amendments is outlined below. These changes are believed to introduce no new matter and their entry is respectfully requested.

### Objection to the Drawings

In paragraph 2 of the Office Action, the Examiner objected to the Drawings stating that Figure 1 fails to include a reference number for the Reference Voltage Generator. Applicant has amended Figure 1 to provide a reference number for the Reference Voltage Generator accommodating the Examiner's objection. A replacement sheet is attached to this Paper. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the objection.

### Objection to the Specification

In paragraph 3, the Examiner objected to the Specification requesting that the Applicant add a Brief Summary of the Invention to the application. However, Applicant would like to kindly point out that both the M.P.E.P. and 37 C.F.R. §1.73 do not require the presence of a "Summary of the Invention" in a patent application. They merely indicate where in the application the "Summary of the Invention" should be placed if Applicant were to elect to include one.

In particular, 37 C.F.R. §1.73 only states that “[a] brief summary of the invention ... should precede the detailed description.” 37 C.F.R. §1.73 does not state “must” or “shall.” Accordingly, Applicant has elected not to include a “Summary of the Invention” as this is within the discretion of Applicant.

In paragraph 4, the Examiner objected to the Specification stating that there was a missing period on page 3 at line 14 and that on page 9, line 1, configuration bits 152 should be renumbered as 150. By the foregoing Amendment, Applicant has amended the Specification to accommodate the objection. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the objection.

Rejection of Claims 5-7 and 26-29 Under 35 U.S.C. §112, Second Paragraph

In paragraph 5, the Examiner rejected claims 5-7 and 26-29 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the Examiner requested that the phrase in claim 5 reciting “further comprising second logic *coupled* to open and close the set of switches...” be corrected. By the foregoing Amendment, Applicant has amended claim 5 to delete the word “coupled” to accommodate the rejection. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claim 5. Claims 6-7 properly depend from claim 5 and thus Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 6-7.

The Examiner also stated that it was not clear where the “configuration bits” recited in claim 26 come from and what the relationship between the “first number of input pins” and the “second number of input pins” is. By the foregoing Amendment, Applicant has amended claim 26 to further define where the “configuration bits” recited in claim 26 come from and what the relationship is between the “first number of input pins” and the “second number of input pins” to accommodate the rejection. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claim 26. Claims 27-29

properly depend from claim 26 and thus Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 27-29.

Rejection of Claims 5-6 and 12-13 Under 35 U.S.C. §112, Second Paragraph

In paragraph 6, the Examiner rejected claims 5-6 and 12-13 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the Examiner states that the phrase in claim 5 reciting “the set of switches” lacks antecedent basis. By the foregoing Amendment, Applicant has amended claim 5 depend from claim 3 rather than claim 1 to accommodate the rejection. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claim 5. Claim 6 properly depends from claim 5 and thus Applicant respectfully requests that the Examiner reconsider and remove the rejection to claim 6.

The Examiner also states that the phrases in claims 12 and 13 reciting “set of analog voltages” lack antecedent basis. By the foregoing Amendment, Applicant has canceled 12 and 13 to render the rejection moot. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 12 and 13.

Rejection of Claims 1-4, 8-11, and 17-20 Under 35 U.S.C. §103(a)

In paragraph 7, the Examiner rejected claims 4, 8-11, and 17-20 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No 5,600,247 to Matthews (hereinafter “Matthews”) To establish a *prima facie* case of obviousness, an Examiner must show that the cited reference teaches each and every element of the claimed invention and there is some suggestion or motivation to modify a reference to arrive at the claimed invention. (MPEP §2143.) The suggestion or motivation to modify reference teachings must be found in the references relied upon (MPEP §2143.01). Applicant respectfully traverses the rejections.

Amended claim 1 recites in pertinent part “a set of voltage generators to generate a set of direct current (DC) voltages; a set of sense amplifiers coupled to compare a reference voltage with the set of DC voltages; and a boundary scan register coupled to each sense

amplifier in the set of sense amplifiers to interpret the comparison of the reference voltage and the set of DC voltages.” Support for these amendments can be found in Applicant’s Specification at page 14, third paragraph.

Matthews fails to disclose at least these elements. Matthews appears to teach a battery monitoring circuit. Matthews does not appear to teach an integrated circuit having a boundary scan register. Applicants therefore respectfully submit that Matthews fails to show each and every element of claim 1 and thus does not render claim 1 unpatentable. Claims 2-4 properly depend from claim 1 and thus Matthews fails to render them unpatentable as well.

By the foregoing Amendment, Applicant has amended claim 8 to include the subject matter of claim 12, which the Examiner indicated would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 8 is now in condition for allowance. Claims 9-11 properly depend from claim 8 and thus should be in condition for allowance as well.

By the foregoing Amendment, Applicant has amended claim 17 to include the subject matter of claim 21, which the Examiner indicated would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 17 is now in condition for allowance. Claims 18-20 properly depend from claim 17 and thus should be in condition for allowance as well.

#### Rejection of Claims 26 and 30 Under 35 U.S.C. §103(a)

In paragraph 7, the Examiner rejected claims 26 and 30 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No 5,600,247 to Matthews (hereinafter “Matthews”)

By the foregoing Amendment, Applicant has amended claim 26 to include the subject matter of claim 27, which the Examiner indicated would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 26 is now in condition for allowance.

By the foregoing Amendment, Applicant has amended claim 30 to include the subject matter of claim 31, which the Examiner indicated would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 30 is now in condition for allowance.

#### New Claim 33

By the foregoing Amendment, Applicant has added claim 33, which is the subject matter of claim 8 and the subject matter of claim 13. The Examiner indicated that claim 13 would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 33 is now in condition for allowance. Claims 34-36 properly depend from claim 33 and thus should be in condition for allowance as well.

#### New Claim 37

By the foregoing Amendment, Applicant has added claim 37, which is the subject matter of claim 8 and the subject matter of claim 14. The Examiner indicated that claim 14 would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 37 is now in condition for allowance. Claims 38-39 properly depend from claim 37 and thus should be in condition for allowance as well.

#### New Claim 40

By the foregoing Amendment, Applicant has added claim 40, which is the subject matter of claim 17 and the subject matter of claim 22. The Examiner indicated that claim 22 would be allowable if rewritten in independent form including all the limitation of any intervening claims. Accordingly, Applicant respectfully submits that claim 40 is now in condition for allowance. Claims 41-43 properly depend from claim 40 and thus should be in condition for allowance as well.

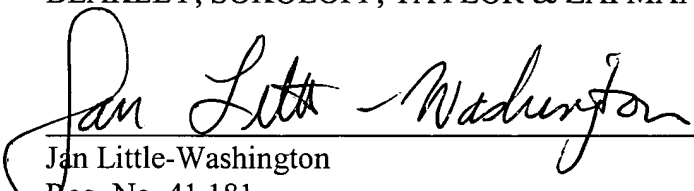
## CONCLUSION

Applicant submits that all grounds for rejection have been properly accommodated, traversed, or rendered moot, and that the application is now in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 1/26/2004

  
Jan Little-Washington  
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## FIRST CLASS CERTIFICATE OF MAILING

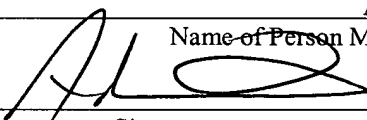
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